

Date: Tue, 2 Mar 93 22:25:44 PST
From: Info-Hams Mailing List and Newsgroup <info-hams@ucsd.edu>
Errors-To: Info-Hams-Errors@UCSD.Edu
Reply-To: Info-Hams@UCSD.Edu
Precedence: Bulk
Subject: Info-Hams Digest V93 #277
To: Info-Hams

Info-Hams Digest Tue, 2 Mar 93 Volume 93 : Issue 277

Today's Topics:

2m Beam
Anode Lines for VHF
Call Sign Server
Comments on QSO Logging Software
Dayton Hamvention, car rentals?
FAQ: Supermorse for the PC? (2 msgs)
Gas filled coax (Was: Re: Soldering PL259's)
Ground planes and vertical dipoles (2 msgs)
How about a J-wire for HF?
Info needed on GPS
license processing time
NEED DOPPLER DF INFO
R-648/ARR-41 info needed
Soldering PL259's
Study Guides in electronic form
TH-28A

Send Replies or notes for publication to: <Info-Hams@UCSD.Edu>
Send subscription requests to: <Info-Hams-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Info-Hams Digest are available
(by FTP only) from UCSD.Edu in directory "mailarchives/info-hams".

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.

Date: Tue, 2 Mar 1993 15:48:53 GMT
From: elroy.jpl.nasa.gov!usc!sdd.hp.com!col.hp.com!fc.hp.com!jayk@ames.arpa
Subject: 2m Beam
To: info-hams@ucsd.edu

>Everyone seems in agreement that larger diameter elements give wider
>bandwidth, yet when I tried playing with the Yagimax program that is

>floating around the net, it seems to indicate the opposite, at least in terms
>of SWR (the gain and F/B are less definitive). I wanted to try mininec on
>the same examples, but it is not very user friendly.

I modeled some 80 meter verticals on AO 5.0, which uses Mininec.
When the vertical is made of #12 wire the 2:1 SWR bandwidth is about
100 kHz. If I change the vertical to 6 inch O.D. tubing the 2:1 SWR
is about 400 kHz.

>Anyway, I too am trying to put together a Yagi, but have had
>a hard time trying to find tubing of the recommended diameter, and was
>hoping to find out how the results would change with different size tubing.

Texas Towers sells aluminum tubing, see ad in most ham magazines.
Or refer to previous flame fest regarding Texas Towers and find another
place :-).

>Also, is there a rule of thumb for spacing of gamma and "T" matches,
>relative to tubing size?

>

>Thanks in advance. 73 B.J. N3JLQ

Sorry can't help you with the spacing but I would recommend the T match
(or some kind of balanced match) over the Gamma. The Gamma match will
likely somewhat disrupt the nice pattern you are trying to achieve with
your yagi.

|Yagis are not mysterious. Just resonate the driven element on the boom,
|then cut the reflector +5% and the directors -5%. Then rematch the DE
|with a gamma, hairpin, or other match of your choice. If you want the
|bandwidth to be wider, use larger-diameter elements.

|

|Yagis are really forgiving even if you're off by 1/4", so mark with a
|crayon and cut with a blowtorch. :-)

While following the above will generally give you a yagi with gain and
front to back it won't be the best. Proper tuning will usually increase
the gain by a db or 2 (on a five element yagi) and can increase the
front to back by many db. Also bandwidth can be increased by proper
tuning of the antenna. Some very good examples of yagi designs (for HF)
can be found in the last chapter of 'Physical Design of Yagi Antennas'
by W6QHS (ARRL Publications). One of the antennas discussed in the book
is a five element 20 meter yagi. It has very nice gain / front to back
and covers the entire 20 meter band with a SWR under 1.5:1. This antenna
scaled to 2M should cover most of the band with reasonable SWR.

73, Jay Kesterson K0GU

jayk@fc.hp.com

Date: 2 Mar 93 16:40:12 GMT

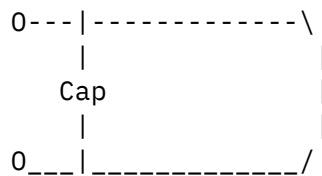
From: mvb.saic.com!unogate!news.service.uci.edu!usc!howland.reston.ans.net!
paladin.american.edu!news.univie.ac.@"hp4at!mcsun!uknet!uos-ee!ee.surrey.ac.uk!
M.Willis@network.UCSD.EDU

Subject: Anode Lines for VHF

To: info-hams@ucsd.edu

I am trying to build a dual valve amplifier for 144 MHz. The design is two tubes in push-pull via a horshoe shaped anode line. Question is, how do I calculate the length of line required given the diameter of the tubing used, valve impedance, box dimensions etc etc.

Make one and see if it works is one option, but there must be a better way to get it right first time. The W1SL design uses copper plate and a line of 11" spaced 1" from the bottom of the box. My design uses 22mm dia water pipe of 10" on each leg plus 3" between the legs.



Where the 0 is a representation of the valve.

So will it resonate? What should the capacitance (Cap) be?

This line is loaded by the output loop and has a Q of around 10.

It is this long because that is the longest it can be and still fit in the box, the valves are 4cx250Bs though I don't think that matters.

73 Mike

Date: Tue, 2 Mar 1993 16:18:10 GMT

From: agate!howland.reston.ans.net!zaphod.mps.ohio-state.edu!cs.utexas.edu!
hermes.chpc.utexas.edu!news.utdallas.edu!feenix.metronet.com!marcbg@ames.arpa

Subject: Call Sign Server
To: info-hams@ucsd.edu

Any interest in updating the call sign server? Is this already being done? Last update looks like June of last year.

--
Marc Grant | Internet: marcbg@feenix.metronet.com
POB 850472 | Amateur Radio Station N5MEI
Richardson, TX 75085| "That's my perception of reality"
- - - ... - - -... -... ..- - - -... - - - ...

Date: 2 Mar 93 16:31:07 GMT
From: ogicse!uwm.edu!zaphod.mps.ohio-state.edu!news.acns.nwu.edu!
casbah.acns.nwu.edu!rdewan@network.UCSD.EDU
Subject: Comments on QSO Logging Software
To: info-hams@ucsd.edu

I am looking for QSO logging software for a PC AT clone with 512KB memory that will

- * work with a Kenwood TS850s and interface
- * PK232 TNC for packet cluster spots
- * keep track of QSO/QSL info for DXCC etc

I do not need it for contesting as I use CT for that. CT is great.

Rajiv
aa9ch
Address: r-dewan@nwu.edu
Phone: None. Only CW.

Date: 1 Mar 93 21:19:16 GMT
From: pa.dec.com!engage.pko.dec.com!nntpd.lkg.dec.com!ryn.mro4.dec.com!
fccvde.enet.dec.com!klimasewski@decwrl.dec.com
Subject: Dayton Hamvention, car rentals?
To: info-hams@ucsd.edu

Has the Dayton Hamvention Committee setup a special price for car rentals?

Ken N1KK

Date: 2 Mar 1993 09:49:38 -0800

From: pacbell.com!amdahl!key!not-for-mail@network.UCSD.EDU
Subject: FAQ: Supermorse for the PC?
To: info-hams@ucsd.edu

Sorry about the wasted bandwidth: I can't find the FAQ and archie
doesn't seem to be any help...

I would like to find a copy of supermorse that runs on a PC and uses
the standard speaker.

I have supermorse for my Sparc and I love it. Unfortunately my coworkers
don't and I'm going to have to move my code practice to home.

Can anyone point me to an FTP site?

Many Thanks
Jerry

--

J. R. Pendleton, who does not speak for Key Computer Labs or Amdahl Inc.
uucp: jerry@key.amdahl.com Voice : (510)623-2146 Amateur : KC6RT0
"Eagles soar, but weasels never get sucked into jet engines"
"Truly free people own guns"

Date: Tue, 2 Mar 1993 20:20:25 GMT
From: news.Hawaii.Edu!uhunix3.uhcc.Hawaii.Edu!whinery@ames.arpa
Subject: FAQ: Supermorse for the PC?
To: info-hams@ucsd.edu

In article <1n06nj\$1sf@neuromancer.key.amdahl.com> jerry@key.amdahl.com (Jerry
Pendleton) writes:

>I would like to find a copy of supermorse that runs on a PC and uses
>the standard speaker.

>

>Can anyone point me to an FTP site?

gatekeeper.dec.com, in /pub/micro/msdos/simtel20/sm316.zip

That's a simtel20 mirror site, but it acts like regular ftp, rather than awful
old TOPS20...

--

D. Alan Whinery, Computer Networks Engineer	
The University of Hawaii at Manoa	networks@uhunix.uhcc.hawaii.edu
2565 The Mall, Honolulu, HI 96822	whinery@nancy.uhcc.hawaii.edu
(808)956-9167 FAX (808)956-2412	

Date: 2 Mar 1993 20:07:54 GMT
From: saimiri.primate.wisc.edu!news.larc.nasa.gov!grissom.larc.nasa.gov!
kludge@ames.arpa
Subject: Gas filled coax (Was: Re: Soldering PL259's)
To: info-hams@ucsd.edu

In article <553@radio.nusc.navy.mil> keith@radio.nusc.navy.MIL writes:
>In rec.radio.amateur.misc, zlau@arrl.org writes:
>
>>Anyone have any practical ideas for preventing water from condensing
>>inside 9913? I know the broadcast stations pressurize their cables
>>with dry gas, but don't know of amateurs going through this trouble.
>
>I know of a ham in Western New York that in fact does have several gas
>pressurized heliax lines (I think that's what it is... some kind of big stuff)
>running underground from the radio room to the towers. There are several
>gauges mounted on the wall next to where the cables come in to monitor
>pressure in the lines.

I work weekends at a noncommercial station with a budget probably lower
than many amateurs, and we have a nipple on one of the flanges of the heliax
going to a short copper tube, and into a sealed plastic project box full of
sal ammoniac. I replace the dessicant about every six months.
--scott

Date: Tue, 2 Mar 1993 15:04:35 GMT
From: mvb.saic.com!unogate!news.service.uci.edu!usc!howland.reston.ans.net!gatech!
kd4nc!ke4zv!gary@network.UCSD.EDU
Subject: Ground planes and vertical dipoles
To: info-hams@ucsd.edu

In article <111977@netnews.upenn.edu> yee@mipg.upenn.edu (Conway Yee) writes:
>Thanks for all the info about ground planes. I think I understand
>them a bit better now (at least to the point where I understand the
>difference between safety/Earth ground and the RF ground.
>
>About the ground planes, though- they should be 1/4 wave radials.
>No problem so far. In HF mobile, however, the groundplane is the
>top of the car? It is highly unlikely that the "size" of the car
>is 1/4 wave. I could see that the top of the car could conceivably
>be the equivalent of an infinite number of radials but these radials
>wouldn't be 1/4 in length. I also see that the size of the top must
>be an important factor (at least in terms of a minimum size) since if
>it were not, the limit as the size approaches zero would also be a

>valid groundplane but this can not be. How does groundplanes which
>are flat plates determined?
>
>Also, the fact that the radials are 1/4 wave is an interesting point
>by itself. What is the tolerance of these radial lengths? What is
>the effect of having a radial which is a bit longer or a bit shorter?

There's nothing really magic or sacred about 1/4 wave radials. It just turns out that if you can't supply an infinite conductive sheet, the ultimate ground"plane", then a few resonant lengths of wire work better than a few non-resonant lengths of wire. That's because reactance effects are nulled at a resonant length and the wires couple better to the surrounding "ether", in effect closing the "holes" in the groundplane. You don't have to use 1/4 wave, you can use any resonant length, though *even* multiples of 1/4 wave can cause matching problems at the feedpoint. One common technique that doesn't use resonant lengths for a groundplane is the chicken wire ground. Just burying, shallowly, a bunch of chicken wire under and around your antenna will create a good groundplane without being resonant. (Note to those tempted to do this, the wire corrodes away quickly and will have to be replaced every couple of years. Not fun. You can suspend it *above* ground, however, and it will work like the "elevated" radials discussed in QST, only better. Use it as a grape arbor if appearance is important.)

Gary

--

Gary Coffman KE4ZV		You make it,		gatech!wa4mei!ke4zv!gary
Destructive Testing Systems		we break it.		uunet!rsiatl!ke4zv!gary
534 Shannon Way		Guaranteed!		emory!kd4nc!ke4zv!gary
Lawrenceville, GA 30244				

Date: Tue, 2 Mar 1993 15:33:43 GMT
From: agate!howland.reston.ans.net!gatech!kd4nc!ke4zv!gary@ames.arpa
Subject: Ground planes and vertical dipoles
To: info-hams@ucsd.edu

In article <14570667@hpnmdla.sr.hp.com> alanb@hpnmdla.sr.hp.com (Alan Bloom) writes:

>Gary wrote:

>

>>In the Hustler design, they used a hollow mast to conduct the coax to
>>the center of the antenna. This, of course, completely shielded the
>>coax from the near field and supplied mechanical support to the antenna,
>>but the mast could then become the unintended radiator. It's exposed
>>at the minimum current node, however, and doesn't seem to be a problem. A
>>toroid donut at that point should make it really clean, but I haven't
>>noticed any real difference in performance with or without a toriod.

>
>It doesn't matter whether or not the coax is "shielded" by a metal mast.
>As you noted, the unwanted current can flow on the mast just as easily
>as on the outside of the coax braid. How much common-mode current
>you get is a strong function of feedline (or mast) length.
>
>Recently, WB6FRZ and I did some experiments with an HT suspended
>beneath a J-pole antenna that was hanging on a rope strung between
>John's tower and a wooden pole. (We also tested a conventional
>ground plane antenna for comparison.) We measured feedline currents
>with a small shielded loop connected through coax to a spectrum
>analyzer. Sure enough, we found if we used just the "wrong" length
>of coax to the HT (an odd multiple of a quarter wave) we got very
>strong currents. With even multiples of a quarter wave, currents
>were near zero. This happened with both the ground plane and with
>the J-pole, although it was about 10 dB (3x) worse with the J-pole.
>
>If you think about it, it makes sense. We know that the antenna
>return currents flow in the ground plane radials. These currents
>don't know the difference between a 1/4-wave radial and any other
>1/4-wave length of metal attached to the coax shield at the feed point.
>The outside of the coax shield itself is such a piece of metal.
>
>The cure was to wrap several turns of coax, just below the feedpoint,
>through a toroid from John's junk box. Using the toroid with the
>ground plane, feedline current was near zero for any feedline length.
>Results with the J-pole were not quite as good, but the toroid still
>helped a lot. We also tried just coiling the coax a few turns (with
>no toroid). This didn't work as well. With both antennas, we could
>still find a feedline length that caused considerable common-mode
>current to flow.

If you get a chance, retest this with the sleeve design. The sleeve
is supposed to act as a choke for currents on the outside of the
shield at the feedpoint. A mast would form a double shield. The
only way currents can get on the outside of the shield in such an
arrangement is through induction at the far end of the sleeve. Since
this is a current zero in this design, induction is minimized.
Near field effects can still cause some pickup, but it should be
much less than with the J-pole design.

Gary

--

Gary Coffman KE4ZV		You make it,		gatech!wa4mei!ke4zv!gary
Destructive Testing Systems		we break it.		uunet!rsiatl!ke4zv!gary
534 Shannon Way		Guaranteed!		emory!kd4nc!ke4zv!gary
Lawrenceville, GA 30244				

Date: Tue, 2 Mar 1993 16:22:07 GMT
From: elroy.jpl.nasa.gov!usc!sdd.hp.com!hpscit.sc.hp.com!hpuerca.atl.hp.com!
edh@ames.arpa
Subject: How about a J-wire for HF?
To: info-hams@ucsd.edu

In <9303011310.A22824@sceng.ub.com> thorburn@sceng.UB.COM (Thorburn_Gary) writes:
(stuff deleted for bandwidth)

> Maybe we could "test" this idea by diatribe here on the
> forum before I actually build one: How about extending the
> j-pole design to a wire antenna for HF (say, 30m)
> constructed of a wire "pole", and some 450-ohm ladderline
> for the "J". It would be fed at the appropriate point on
> the ladder line by a balun, and coax to the rig.

Don't know about 30m (that'd be getting to be a l.o.n.g. sloper!),
but a friend (KF5RX) built a 10 meter tv-twinlead J-pole using the
traditional formula (3/4 wave overall length, bottom 1/4 matching
section (one side of twinlead cut open at that point). He was happy
enough with it, but decided he had better uses for the wire and
tore it down (when he got a 5 element 10 meter beam!).

I could (of course) copy his local signal very well. More to the
point was he kept beating me out on 10 meter DX: sometimes my 1/4
vertical couldn't even hear the DX station.

If someone has space, height, and wire enough, I'd say give it
a whirl on 30 meters. Keep the neet posted, of course :-)

Cheers & 73 Ed Humphries Hewlett-Packard NARC Atlanta GA
edh@hpuerca.atl.hp.com

Date: 2 Mar 93 23:20:23 GMT
From: ogicse!uwm.edu!zaphod.mps.ohio-state.edu!sdd.hp.com!hpscit.sc.hp.com!
jeff@network.UCSD.EDU
Subject: Info needed on GPS
To: info-hams@ucsd.edu

I found an ad for a company in Arlington, VA that claims to be the "only
company specializing in GPS seminars and books." _I have no idea_ if they
have anything worthwhile (I'm still waiting for their catalog :-), but
here's the info:

Caveat Emptor!

— —

Date: Tue, 2 Mar 1993 13:45:16 GMT
From: agate!howland.reston.ans.net!usc!cs.utexas.edu!torn!utgpu!utcsri!
newsflash.concordia.ca!hobbit.ireq.hydro.qc.ca!barde!vaillan@ames.arpa
Subject: NEED DOPPLER DF INFO
To: info-hams@ucsd.edu

In article 6092@wkuvx1.bitnet, bcobb@wkuvx1.bitnet () writes:
>Am looking for any information concering doppler shift direction
>finding. Several firms market doppler shift RDF equipment, but I can't
>seem to find any schematics..I wan't to build somthing to track down
>some local repeater problems.. Any infor would be of help..73 and tn timer
>Bob-KA4CLL

Buy this book:
Transmitter Hunting by Curlee and Moell (TAB Books)

I know where to get the pc board for the units in chapter 9.

It is well explained and the unit is easy to build for an amateur.

Clem.

73

Clement Vaillancourt,		Institut de Recherche d'Hydro-Quebec
Analyste,		Varenn es, P. Quebec, Canada, J3X 1S1
Division Informatique scientifique		Tel:+1 514 652 8238 Fax:+1 514 652 8309
vaillan@ireq.hydro.qc.ca		Radio-amateur: VE2HQJ@VE2CSC.PQ.CAN.NA

Date: 2 Mar 93 06:31:17 GMT
From: ogicse!uwm.edu!zaphod.mps.ohio-state.edu!cs.utexas.edu!not-for-mail@network.UCSD.EDU
Subject: R-648/ARR-41 info needed
To: info-hams@ucsd.edu

Howdy.....

I am starting to accumulate (collect...;-)) military radios.....and as I have not had much luck sending e-mail to Fidonet from my address, I wonder if you would care to "shoot the bull" about these radios as well.....My address is listed below.....

Would appriciate any hearing any experiences you've had, ok?

Tnx es 73!

T.M.K.

In <731062116.AA06162@csource.oz.au>
Leroy.Ritta@f851.n800.z3.fidonet.org (Leroy Ritta) writes:

[deletions]

% BTW if you are into surplus military radio's let me know, I wouldn't mind jawin
% with you again
% some time.

%

%

%

% ---
% X KWQ/2 1.0C X "Beam me up Scotty, there is no intelligent life here"

%

% * Origin: Biz-Nice! S.Oz Business BBS! 4 Lines 08-269 7029/7809 (3:800/851)

%

Internet: phantom@pro-haven.cts.com KJ5GU/AE
UUCP: crash!pro-haven!phantom Try 28.440MHz.....
For the latest breaking Aggie Jokes, Dial 1-800-AGGIE-IQ.....
".....and for the first time in twenty years in Waxahachie, Texas.....
.....it rained!" The Rocky and Bullwinkle Show

Date: Mon, 1 Mar 1993 15:09:41 GMT
From: decctrl!news.crl.dec.com!dbased.nuo.dec.com!nnntpdlkg.dec.com!
decabo.abo.dec.com!anarky.enet.dec.com!brewer@decwrl.dec.com
Subject: Soldering PL259's
To: info-hams@ucsd.edu

In article <14570654@hpnmdla.sr.hp.com>, alanb@hpnmdla.sr.hp.com (Alan Bloom)
writes...

>In rec.radio.amateur.misc, Dennis_Birch@vos.stratus.com (Dennis Birch) writes:

>

>>I just spent most of this weekend putting up a new antenna, and most of the
>>time seemed to be in soldering connectors onto the cable. I was using
>>PL259's, and Belden 9913, and if I applied heat long enough to flow solder
>>into the holes and onto the shield, it also seemed to be enough to melt the
>>core and cause shorts. I tried a regular soldering station, a 100 watt
>>soldering gun and a propane torch. Does anybody have any hints on
>>soldering these things reliably?

>

>Here's how to make a reliable solid PL-259 solder job strong enough to
>support the weight of an N1AL (all 240 pounds of him!):

>

>[...]

>There are diagrams showing how to do this in the Transmitter chapter
>of the ARRL RFI book.

>

>AL N1AL

The only thing I could add to this excellent treatise
is, use a small file to file away the plating around
the solder holes (where the braid gets soldered) on
all connectors that are NOT silver plated. This seems
to make things MUCH easier!
/john

```
-----  
| John Brewer | Internet: brewer@anarky.enet.dec.com |  
| wb5oau      | Packet   | wb5oau@wb2ars      |  
-----
```

Date: 1 Mar 93 14:42:59 CST
From: equalizer!timbuk.cray.com!hemlock.cray.com!cherry10!dadams@network.UCSD.EDU
Subject: Study Guides in electronic form
To: info-hams@ucsd.edu

In article 10989@cactus.org, barron@cactus.org (Robert Barron) writes:
|I am posting this request for friend studying to get his license.
|He would like to know if there are any study guides (such as Now You're
|Talking, etc.) in computer readable form. He has the question pool on
|disk but would like to work with some more in depth material.

|

|73,

|Robert, KA5WSS

|barron@cactus.org

|--

|Robert Barron, KA5WSS-----
|P.O. Box 180703 Internet: barron@cactus.org
|Austin, TX 78718-0703 Packet: ka5wss@n5ljf.tx.usa.na
|(512) 837-4051 AMPR: ka5wss@ka5wss.ampr.org [44.76.1.184]

I would second the motion. With all the talent in this group, it seems
like we could put something together.

--David C. Adams Statistician Cray Research Inc. dadams@cray.com

Old Sourdoughs never die. They just ferment away.

Date: Mon, 1 Mar 1993 21:28:53 GMT
From: mvb.saic.com!unogate!news.service.uci.edu!usc!howland.reston.ans.net!

zaphod.mps.ohio-state.edu!pacific.mps.ohio-state.edu!linac!att!att!fang!tarpit!
bilver!jwt!ksj@network.UCSD.EDU
Subject: TH-28A
To: info-hams@ucsd.edu

I've just purchased a Kenwood TH-78A, and would be very interested in hearing about any extended receive modifications or undocumented key combinations on the rig. If anyone has this information, please send me a copy via e-mail at ksj7i@virginia.edu or bbs-ksj@jwt.uucp. Thanks.

Scott Johnson KD4DCY

End of Info-Hams Digest V93 #277
